

**AMENDMENTS TO THE DRAWINGS**

The attached sheet of drawings includes new drawings Fig. 5 and Fig. 5A. This sheet depicts an example of a wheel on a mousing device as claimed in claims 4 and 10.

Attachment: New Sheet

### REMARKS/ARGUMENT

The Final Office Action of October 25 2007 has been reviewed and the comments therein were carefully considered. The present application includes claims 1-22. Claims 1-22 have been rejected by the Examiner. By this response, claims 1, 3, 4, 7, 10, 13 and 22 have been amended. No new matter has been introduced into the application. Of the rejected claims, currently amended claims 1, 7, and 13 are independent claims. With regard to these independent claims, claim 1 has been amended to include the claim feature of “rotational movement.” Claim 7 has been amended to include the claimed feature of “rotational motion.” Claim 13 has been amended to include the claimed feature of “rotational motion.” Support for the amendments to independent claims 1, 7, and 13 may be found at least in paragraph [0009] of the published application US 2005/0116935. Amendments to dependent claims 3, 4, 10 and 22 are to correct informalities and to clarify what is claimed.

### DRAWINGS

The Office Action has objected to drawings under 37 CFR 1.83(a). Specifically, the Office Action states that the embodiment claimed in claims 4 and 10 must be shown. Accordingly, Applicant has submitted with this application a New Sheet with Figures 5 and 5A depicting an embodiment of the features claimed in claims 4 and 10.

Further, the specification has been amended to include new paragraphs [0016.1], [0041.1] and [0042.2]. New paragraph [0016.1] has been added to the **Brief Description of Several Views of the Drawings** section of the specification to briefly describe new Figures 5 and 5A. New paragraphs [0042.1] and [0042.2] have been added to the specification in the **Detailed Description of the Invention** section to properly describe Figures 5 and 5A. No new matter has

been added to the specification. Support for the features shown in Figures 5 and 5A can be found in at least paragraph [0011] of the published application US 2005/0116935.

**REPLY TO EXAMINER'S ARGUMENTS**

The arguments in the Office Action have been carefully considered and the Applicant respectfully disagrees. Claims 1, 7 and 13 have been amended to clearly point out and distinctly claim the Applicants invention. Claims 1, 7, and 13 have been amended to add that the movement claimed is a rotational movement of the track ball that generates and executes a command through translation of the rotational trackball motion. Support for these amendments may be found at least in paragraph [0009] of the published application US 2005/0116935. The Office Action states that Figure 6 in Gaughan (US 5,589,893) shows that the trackball has an X, Y and Z axis motion. The Office Action also states that it is this Z-axis motion of the trackball (or downward motion) that is translated into a command for executing a function of the display imaging system. The Office Action further states that this downward motion satisfies the claim limitations requiring that the movement of the trackball be translated into a command for executing a setting of function. Amended claims 1, 7 and 13 specify that the rotational movement of the trackball translates into a command for execution and this rotational movement transmits the command to the diagnostic imaging system, not the downward movement of the trackball as is stated in the Office Action. Nowhere does Gaughan claim or disclose that rotational movement of the trackball translates into a command for execution and this rotational movement transmits the command to the diagnostic imaging system. In fact, Gaughan requires a downward movement, not a rotational movement to execute a command. See, e.g., col. 3, lines 2-8 and col. 5, lines 1-7.

**REJECTIONS UNDER 35 USC § 103(a)**

Claims 1-3, 5-9, 11-19, and 21-22 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Funda et al. (U.S. Patent No. 5,417,210) in view of Gaughan et al. (U.S. Patent No. 5,589,893). The Applicant traverses this rejection for at least the following reasons.

**CLAIMS 1, 2, 3, 5 AND 6**

With respect to claim 1, Funda relates to an endoscopic surgery system and method. In endoscopic surgery, positional information is determined about a designated anatomical feature which is hidden within a patient's body. The information is used to position surgical instruments in the body with respect to the anatomical feature. See col. 3, lines 55-61. The system of Funda includes a stereoscopic display of the patient's anatomy during the surgical procedure. A surgeon can manipulate a cursor on the stereoscopic display. See col. 9, lines 59-65. A joystick, a trackball, or voice may be used to move the cursor. See col. 9, line 65 – col. 7, line 2.

Thus, the system of Funda may include a trackball, but that trackball is simply used to move the cursor on the screen, rather than to control functionality on the screen, let alone functionality of the imaging system. As noted by the Examiner, Funda does not disclose that the trackball remotely controls the imaging system.

As previously discussed, Gaughan relates to an on-screen remote control of a television receiver. See, e.g., Abstract. Gaughan does not relate to a medical diagnostic imaging system. Gaughan has no applicability to a diagnostic imaging system. Furthermore, Gaughan does not teach or suggest use in a medical diagnostic imaging system environment. Rather, Gaughan discusses a remote control that allowed a user to control a television screen. See, e.g., Abstract. Gaughan fails to disclose the control recited in the presently amended claims. That is, rotational

movement of the trackball in Gaughan simply moves a cursor in a viewing screen, rather than executing a command. Col. 4, line 40 – col. 5, line 11. As discussed in Gaughan, the trackball produces X and Y coordinate or displacement information in response to the rotational movement of the trackball. See, e.g., col. 2, line 65 – col. 3, line 2; col. 3, lines 30-59; and col. 4, lines 63-65. This X, Y coordinate information is used to move the cursor on the screen, rather than trigger other functions to control the machine by virtual of the trackball motion. In fact, Gaughan states that a switch and/or keyboard on the trackball is used for function key control of different television functions. See, e.g., col. 3, lines 2-8 and col. 5, lines 1-7. Activation of functions and/or other control caused by depressing the trackball in the Z axis direction is clearly distinct from the rotational trackball motion as recited in amended claim 1 of the present application. In contrast to Gaughan, presently amended claim 1 recites generating a command through the rotational translation of the trackball motion and executing that command at a medical diagnostic imaging system. Claim 1 further specifies that the command adjusts a setting of function of the medical diagnostic imaging system.

Thus, for at least these reasons, the Applicant submits that neither Funda nor Gaughan, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 1. Claims 2-3, 5 and 6 are dependent claims and should be allowable at least for the reasons stated.

#### **CLAIMS 7, 8-9, 11-12**

As discussed above, the system of Funda may include a trackball, but that trackball is simply used to move the cursor on the screen, rather than to control functionality on the screen,

let alone functionality of the imaging system. As noted by the Examiner, Funda does not disclose that the trackball remotely controls the imaging system.

Also, as discussed above, currently amended claim 7 recites a trackball that controls a diagnostic imaging system is based on the rotational movement of the trackball. Further, claim 7 recites that the handheld trackball device comprises a transmitter for transmitting a command to a diagnostic imaging system based on rotational motion of the trackball. Gaughan does not disclose a trackball for controlling a display imaging system based on the rotational movement of the trackball. Further, Gaughan does not disclose a transmitter that transmits a command to a diagnostic imaging command based on rotational movement of the trackball. Gaughan discloses that the trackball controls and the transmitter transmits through the depressing of the trackball.

Thus, for at least these reasons, the Applicant submits that neither Funda nor Gaughan, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 7. Claims 8-9, and 11-12 are dependent claims and should be allowable at least for the reasons stated.

#### **CLAIMS 13, 14-19, 21-22**

The system of Funda may include a remote mousing device, but Funda does not disclose a mousing device that remotely controls the imaging system. As discussed above, Gaughan does not disclose a moveable portion for operating a medical diagnostic imaging system based on rotation movement of the moveable portion as recited in currently amended claim 13. Further, Gaughan does not disclose a transmitter for transmitting a command to the diagnostic imaging system based on rotational based on the rotational movement of the moveable portion, the command generated through translation of said rotational motion of the moveable portion for execution at said medical diagnostic imaging system. Thus, for at least these reasons, the

Applicant submits that neither Funda nor Gaughan, taken alone or in theoretical combination, teaches or reasonably suggests all the limitations of claim 13.

Claims 14-19, and 21-22 are dependent claims and should be allowable at least for the reasons stated.

**CLAIMS 4 AND 10**

Claims 4 and 10 have been rejected under 35 U.S.C. 103(a) as being unpatentable over Funda in view of Gaughan and further in view of Chang (U.S. Patent No. 5,298,919). The Applicant respectfully traverses this rejection for at least the reasons discussed below.

As discussed above, neither Funda nor Gaughan, alone or in combination, teaches or reasonably suggests the limitations of independent claims 1 or 7, from which claims 4 and 10 depend, respectively. Additionally, as noted by the Examiner, neither Funda nor Gaughan discloses the added limitations of claims 4 and 10.

While Chang discloses a wheel in a computer mouse, Chang does not disclose or envision the particular arrangement claimed in claims 4 and 10. Chang does nothing to cure the fundamental defects of Funda and Gaughan with respect to the previously claimed invention. Chang has no disclosure of a medical diagnostic imaging system or control of a system through trackball movement to help fill the gaps in Funda and Gaughan. Therefore, the Applicant respectfully submits that claims 4 and 10 are allowable for at least the reasons stated above.

**CLAIM 20**

Claim 20 has been rejected under 35 U.S.C. 103(a) as being unpatentable over Funda et al. (US 5,417,210) in view of Gaughan et al. (US 5,589,893) and further in view of Holmes (US 6,222,526). The Applicant respectfully traverses this rejection for at least the following reasons.

As discussed above, neither Funda nor Gaughan, alone or in combination, teaches or reasonably suggests the limitations of independent claim 13, from which claim 20 depends. Additionally, as noted by the Examiner, neither Funda nor Gaughan discloses the added limitation of claim 20.

Holmes bears no relation to a medical diagnostic imaging system but instead discusses a hand held ergonomic computer controller. See, e.g., Abstract. While Holmes discloses a trackball mounted in its particular hand held ergonomic computer controller, Holmes does not provide or disclose remedy the many defects found in Funda and Gaughan with respect to independent claim 13 and dependent claim 20, including rotational translation of trackball movement into a command for execution at the medical diagnostic imaging system. Therefore, the Applicant respectfully submits that claim 20 is allowable for at least the reasons stated above.

Therefore, the Applicant respectfully submits that the rejections in the final Office Action have been overcome, and the claims should be allowed over the cited art of record.



### CONCLUSION

It is submitted that the present application is in condition for allowance. Applicants respectfully request reconsideration of the pending claims and a finding of their allowability. A notice to this effect is respectfully requested. If the Examiner has any questions or the Applicant can be of any assistance, the Examiner is invited and encouraged to contact the Applicant at the number below.

The Commissioner is authorized to charge any necessary fees or credit any overpayment to the Deposit Account of GTC, Account No. 070845.

Dated: January 23, 2008

Respectfully submitted,

/Dennis P. Hackett/

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